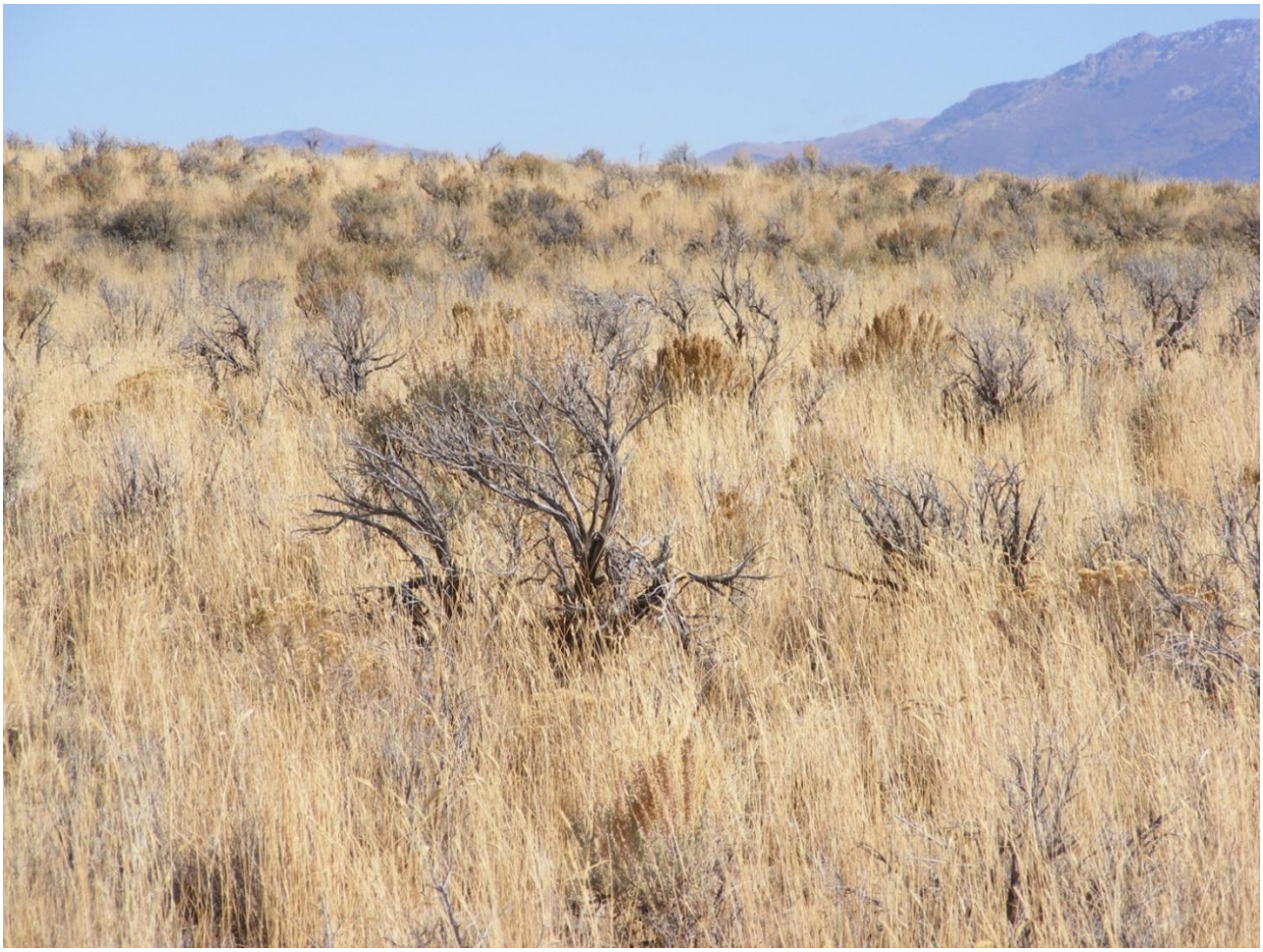
Bellinger Seeding Allotment

Grazing Permit Renewal

ENVIRONMENTAL ASSESSMENT



Tuscarora Field Office
4130 (NVE0200)

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BLM

Elko District Nevada

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1. INTRODUCTION

The Bureau of Land Management (BLM) Elko District, Tuscarora Field Office proposes to issue a decision to provide area-specific direction and management for livestock grazing on the Bellinger Seeding Allotment in Elko County, Nevada (Refer to Allotment Vicinity Map Appendix 1, Map 1).

This Environmental Assessment (EA) has been prepared for compliance with the National Environmental Policy Act (NEPA). This EA tiers to the Environmental Impact Statement (EIS) for the 1987 Elko Resource Management Plan (RMP), and incorporates by reference the July 2009 Draft Northeastern Great Basin Standards and Guidelines Assessment for Rangeland Health and relevant portions of the 1988 Bellinger Seeding Allotment agreement for management changes to livestock grazing. These documents are available upon request to the Tuscarora Field Office, or by calling (775)-753-0200, or send a request in writing to the BLM Elko District, Tuscarora Field Office, 3900 E. Idaho Street, Elko, NV 89801.

In July of 2009, the BLM issued a Draft Standards and Guidelines Assessment for Rangeland Health for the Bellinger Seeding Allotment (BLM 2009). The July 2009 Draft Assessment concluded that all standards have been met by the existing grazing permit terms and conditions and that current livestock grazing practices on the Bellinger Seeding Allotment are in conformance with the guidelines.

The Standards and Guidelines for Rangeland Health established by the Northeastern Great Basin Resource Advisory Council and evaluated in the July 2009 Draft Assessment are available for public review by clicking on link to the BLM Elko District web site below:

http://www.blm.gov/nv/st/en/fo/elko_field_office/blm_programs/grazing.html

Background

The Bellinger Seeding Allotment encompasses 2,413 public land acres and 43 private land acres; the allotment has three fenced pastures (See Map 2 in Appendix 1). Of these fenced pastures, two pastures were converted from native Wyoming big sagebrush sites to crested wheatgrass seedings in the 1960's. The third pasture within the Bellinger Seeding Allotment remains a native pasture. One permittee has grazing privileges on the Bellinger Seeding Allotment. The current term grazing permit is displayed in Table 5., page 22 in the Livestock Grazing section of the Affected Environment.

Total active permitted use *(total active preference stated in table 5. on page 22)* amounts to 586 Animal Unit Months (AUMs), of which 145 are in the Native Pasture, 220 are in the East Seeding, and 221 are in the West Seeding.

In 1988, the BLM issued an agreement for management changes to livestock grazing on the Bellinger Seeding Allotment (BLM 1988). The agreement evaluated livestock grazing practices and management objectives. The agreement implemented changes to livestock grazing. Following the 1988 Agreement, a term and condition was added to the grazing permit that required deferment during the critical growing period two out of every four years for the native pasture; a second term and condition was added requiring that prior to any livestock use the permittee must meet with the BLM Elko District Office to plan periods of use for each pasture within the allotment. The season of use for the allotment is authorized as described in Table 5., page 22 in the Livestock Grazing section of the Affected Environment. Current grazing management is subject to the terms and conditions as stated in section 2.1 of this document.

1.1 Purpose and Need

The purpose of the action is to fully process the term grazing permit (Authorization Number 2703224) on the Bellinger Seeding Allotment in accordance with all applicable laws, regulations, and policies and in accordance with Title 43 CFR § 4130.2(a) which states, "Grazing permits or leases shall be issued to qualified applicants to authorize use on the public lands and other lands under the administration of the Bureau of Land Management that are designated as available for livestock grazing through land use plans." The need for the action is to renew this grazing permit with terms and conditions for grazing use that would continue to meet the Standards and Guidelines for Rangeland Health and further improve Resource Management Plan, and other pertinent multiple use objectives for the allotment.

The Proposed Action and range improvements are necessary to continue meeting rangeland health standards and other multiple use objectives on the Bellinger Seeding Allotment.

The decision to be made is to determine the conditions and limitations necessary to issue a grazing permit that will comply with the BLM's statutory obligations as outlined in 43 CFR § 4130.2 (a) and multiple use mandate specified in Federal Land Policy and Management Act (FLPMA) of 1976, and conform to the fundamentals of Rangeland Health (43 CFR § 4180).

1.2 Relationship to Laws, Policies and Land Use Plans

FLPMA (Act of 1976) requires an action under consideration be in conformance with the applicable BLM land use plan, and be consistent with other federal, state, local and tribal policies to the maximum extent practical.

1.2.1 BLM Land Use Plan Conformance

The proposed action and alternatives conform to the following decisions of The Elko Resource Management Plan (BLM 1985) and Record of Decision (ROD), as approved on March 11, 1987 (BLM 1987). They are further consistent with allotment specific objectives from the Elko Rangeland Program Summary dated July 23, 1987 (BLM 1987).

Elko Resource Management Plan

1. Livestock Grazing (Elko RMP Record of Decision, pages 20, 23-29)
   Objective: Maintain or improve the condition of the public rangelands to enhance productivity for all rangeland values. The following are management actions designed to meet the objective stated above:
   a. license livestock use at the three to five year (1979-1983) average licensed use, and to increase the availability of livestock animal unit months (AUMs) four percent over active preference and 32 percent over the three to five year average licensed use level, if adequately supported by monitoring (1987 Elko Resource Management Plan, Record of Decision, page 20).
   b. Treat or seed 120,978 acres to provide additional livestock forage and reduce the grazing pressure on adjacent areas.
   c. Construct range improvements to improve livestock distribution and utilization of vegetation (Table 2., page 21 of RMP-Record of Decision)
   d. Develop and implement Allotment Management Plans on category I (Improve) and M (Maintain) allotments to improve range conditions while considering multiple-use values and increasing livestock carrying capacity.
   e. Implement rangeland monitoring program to determine of management objectives are being met and if adjustments to grazing management systems and livestock numbers are warranted.
2. Wildlife (Elko RMP Record of Decision, pages 29-33)
   Objective: Conserve and enhance terrestrial, riparian and aquatic wildlife habitat.
   The following are management actions designed to meet the objective stated above:
   a. Manage wildlife habitat to provide forage for Mule Deer, Pronghorn Antelope, and Big Horn Sheep.
   b. Construct range improvements to improve habitat and management of wildlife. Implement vegetation treatments and modify fence within crucial big game habitat.
   c. Monitor the interaction between wildlife habitat conditions and other resource uses and make adjustments in season of use for livestock to improve or maintain essential and crucial wildlife habitats.
   d. Evaluate habitat condition of areas identified by Nevada Department of Wildlife for reestablishment, augmentation, or introduction of wildlife species. Accommodate this through Habitat Management Plans.
   e. Apply restrictions on leasable and/or saleable mineral developments to protect wildlife habitat.
   f. Manage high priority riparian/stream habitat to provide for good habitat condition for wildlife and fish. Provide for a minimum of 30 percent in habitat condition in the short-term from the date of implementation.

Elko RMP Rangeland Program Summary

1. Livestock Grazing
   a. The initial livestock stocking level for the Bellinger Seeding Allotment was 278 AUMs.
   b. In the long-term, provide forage to sustain 974 AUMs for livestock grazing and maintain or enhance the current forage value condition on non-native range. In the short-term, maintain or enhance native vegetation with utilization levels not to exceed 50% on the key species.

1.2.2 Consistency with Non-BLM Authorities

The Proposed Action is further consistent with other Federal, State and local land use policies and plans to the maximum extent possible.

Table 1. below identifies elements of the human environment that would be affected and are regulated by a statutory or regulatory authority and are analyzed in chapter 3 of this EA, as well as those that BLM determined would not be affected.

Table 1. Review of Statutory Authorities

ELEMENT/RESOURCE	Present?	Affected?	Comment
Air Quality	Yes	No	
Area of Critical Environmental Concern	No	No	
Cultural Resources	Yes	Yes	Range improvements inventoried & historic properties avoided. See Cultural Resources discussion in section 3.2.6 of this document.
Environmental Justice	No	No	No low income or minority population would be disproportionately affected by any alternative outlined in this document.
Farm Land -Prime/Unique	No	No	
Floodplains	No	No	
Human Health & Safety	No	No	
Special Status Species, Migratory Birds, and other Wildlife	Yes	Yes	See discussion for Wildlife, Special Status Species and Migratory Birds in section 3.2.5 of this document.
Native American Religious Concerns	No	No	
Invasive Non-Native Species	Yes	Yes	See discussion for Vegetation and Non-Native Invasive and Noxious Species in section 3.2.2 of this document.
Vegetation	Yes	Yes	See discussion for Vegetation in section 3.2.1 of this document.
Livestock Grazing	Yes	Yes	See discussion for Livestock Grazing in section 3.2.3 of this document.
Threatened/Endangered Species	No	No	(May be addressed in a section on Special Status Species)
Soil Resources	Yes	Yes	See discussion for Soils in section 3.2.4 of this document.
Water Quality (Surface/Ground)	No	No	
Wastes, Hazardous/Solid	No	No	

ELEMENT/RESOURCE	Present?	Affected?	Comment
Wetlands, Riparian Zones	No	No	
Wild & Scenic Rivers	No	No	
Wilderness	No	No	
Visual Resource Management	Yes	No	

1.2.3 Guidance for Sage Grouse and Sagebrush Ecosystems

In Nevada, the BLM has recognized that generally lower moisture regimes prevail throughout the majority of Nevada's sagebrush ecosystem. Therefore, BLM developed a set of sage grouse management guidelines consistent with the WAFWA guidelines, yet adapted to Nevada to provide interim guidance to BLM field managers without restricting options being explored for local sage grouse conservation planning. The Nevada BLM Guidelines apply the most current sage grouse science to BLM activities, within the context of a multiple use mandate. Because they are consistent with the WAFWA guidelines and more specific to Nevada, the Elko Field Office would continue to consider the Nevada guidelines, together with the WAFWA guidelines, in managing resources and planning projects to enhance sage grouse and/or sagebrush habitat. The standard operating procedures for the various range improvements necessary for implementation of the alternatives have been reviewed and are consistent with the Nevada and WAFWA guidelines. Nevada BLM Guidelines specific to Fire Management, Emergency Fire Rehabilitation, and Vegetation Treatments have been incorporated into the *Elko* and *Wells RMPs Fire Management Amendment* as standard operating procedures (BLM 2003).

2. ALTERNATIVES

This chapter describes the Proposed Action, No Action alternatives, and proposed range improvements that are applicable to the Proposed Action. It also describes proposed management objectives to be implemented and alternatives that BLM considered but eliminated from further analysis in this EA.

2.1 Current Terms and Conditions of the Grazing Permit

Livestock numbers may vary from those listed depending upon period of use provided that the total number of AUMs of specified livestock grazing for the allotments are not exceeded.

- Additional use above the total number of AUMs of specified livestock grazing may be authorized (Temporary Non-Renewable Use) in accordance with 43 CFR 4130.6-2 when use is below the objective level of 65% in seeded pastures or below 50% in Native Pasture.

- Prior to turn out each year on the Bellinger Seeding Allotment, the permittee will meet with the BLM Elko District Office to plan periods of use for each pasture within the allotment. Grazing use will conform to the limitation outlined below:

  The Native Pasture will be deferred until seedripe at least two out of every four years.

- These terms and conditions replace the 1988 Agreement for the Bellinger Seeding Allotment.

- The terms and conditions of the permit may be modified if additional information indicates that revision is necessary to conform to 43 CFR 4180.

- Pursuant to 43 CFR 10.4(G), the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(C) and (D), you must stop activities in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the authorized officer.

- Actual use data on all pastures must be submitted to this office within 15 days from the last day of use.

- Supplemental feeding is limited to salt, mineral and/or protein supplements in block, granular or liquid form. Such supplements must be placed at least ¼ mile from live waters (springs, streams, and troughs), wet or dry meadows, and aspen stands.

- All riparian exclosures, including spring development exclosures, are closed to livestock use unless specifically authorized in writing by the authorized officer.

2.2 Proposed Terms and Conditions Applicable to all Alternatives

- Grazing use will be in accordance with the Final Permit Renewal Decision for the Bellinger Seeding Allotment dated To Be Determined.

- Planned use would be outlined in a grazing application that is submitted to the BLM for final approval prior to turn out.

- A billing notice would be prepared after the grazing season based on actual use in accordance with 43 CFR 4130.8-1(e).

2.3 Proposed Management Objectives Applicable to Alternative 2

The management objectives below would be included in the Final Decision for the Grazing Permit Renewal for the Bellinger Seeding Allotment, to be subsequently issued following this EA:

1. The utilization objective on native key grass species for the Native Pasture would be a maximum of 50 percent utilization of current year's growth in any given year to be measured at the end of the scheduled use period or growing season whichever occurs later.

2. The utilization objective on the crested wheatgrass would be an average of 50 percent utilization not to exceed 60 percent utilization of current year's growth in any given year. The average of 50 percent utilization would be calculated over a 10-year period. Utilization would be measured at the end of the scheduled use period or growing season whichever occurs later. Non-use of a pasture would not be incorporated into the average for the specified 10-year data collection period.

3. Should these objective levels be exceeded in any pasture of the allotment, future grazing applications will be adjusted as warranted based on the degree of use, period of use, and duration of use relative to past use and future plans for grazing use, and the affects of the utilization on rangeland health and other multiple use objectives.

2.4 Alternative 1 - No Action

Under this alternative, the BLM would issue a new 10-year term permit for the Bellinger Seeding Allotment under the current terms and conditions of the existing permit and future livestock grazing authorizations would be issued the same as past authorizations. Active permitted use would remain at 586 AUMs. See Appendix 1, Map 2 for existing pastures and improvements.

2.5 Alternative 2 – Proposed Action

Under this alternative, the BLM is proposing to renew grazing permit authorization number 2703224 for the Bellinger Seeding Allotment for a term of 10 years. The active permitted use would remain at 586 AUMs. The authorized season of use period (Begin and End dates) of the current grazing permit would be revised from April 1 through December 31 to April 1 through October 31. The BLM would implement the grazing management provisions below:

2.5.1 Proposed Provisions for Grazing Management

The permittee would submit a grazing application to the BLM annually for review prior to grazing use to ensure planned use is consistent with treatment dates, active permitted use for pastures (stated in Table 5, page 22 in the Livestock Grazing section of the Affected Environment), and provisions described in Table 2 below.

Table 2.

Provision 1:	Grazing Treatments on the Bellinger Seeding Allotment would occur from April 1 through October 31.
Provision 2:	Grazing use would be deferred during the critical growing period (5/1-7/15) for each pasture on a three (3)-year rotational basis. Each pasture would be deferred once in three years.
Provision 3:	In the event of a wildfire and a temporary closure of pastures/portions of pastures to livestock grazing is necessary, the BLM and the Livestock Grazing Permittee during this interim closure period, would plan grazing strategies that would achieve objectives and maintain and/or improve resource conditions.

2.5.1.1 Flexibility

The permittee would be allowed 5 days of flexibility before and after the pasture use dates specified on the annual grazing application to adjust for annual fluctuations in livestock numbers, changing climate conditions, and to accommodate livestock movements and removing livestock from pastures, provided that this extended use does not exceed authorized number of AUMs.

2.6 Proposed Range Improvements Applicable to Alternative 2

A proposed pipeline would be installed originating at a well in the Bellinger Seeding Allotment located in Township 34 North, Range 57 East, Section 21, SE ¼ NW ¼. This well currently has an above ground storage tank and two troughs with a water gap for each pasture. The pipeline would be buried underground and would run approximately one (1) mile north along the existing East and West Seeding pasture boundary fence. Water would be pumped uphill from the well to a proposed storage tank and then gravity-fed to the proposed trough locations. The existing storage tank would remain and be used in emergencies to fill the troughs at the well. Refer to section 2.6.1 below (Proposed Special Design Features) for construction specifications and design features for the pipeline and troughs. In order to provide water for livestock, better utilize the allotment, and distribute livestock use more evenly throughout the allotment, two new troughs would be installed on the proposed pipeline at the location stated below. The first trough would be installed in the East pasture and the second trough would be installed in the West Pasture; both troughs would be installed in close proximity (within 300 feet of the fence) to the East and West Seeding pasture boundary fence and within the approved Place of Use. The troughs and storage tank are proposed at the following locations (Refer to Appendix 1, Map 2):

(*Troughs 1 & 2*): T 34N., R 57E., Section 16, NE ¼ of SW ¼
(*Storage Tank*): T 34N., R 57E., Section 21, NE ¼ NW ¼

2.6.1 Proposed Special Design Features

Concerning construction of the pipeline and troughs, the following would be required:

1. Construction of the pipeline and troughs would meet BLM specifications.

2. Stock water troughs will be located to take advantage of topography and vegetation to screen sites from view. Stock water troughs shall be placed so that the height of the top of the rim shall not exceed 20 inches above ground level. The overflow outlets will be located downhill from the trough a minimum of 40 feet.

3. A cultural resource inventory will be completed for the proposed pipeline and troughs prior to construction. Pipeline and troughs will be routed to avoid any prehistoric properties (i.e., sites eligible for the National Register of Historic Places). Archeologists shall monitor the pipeline construction to check for subsurface cultural deposits not visible on the surface. Cultural and Archeological resources are protected under the Archeological Resources Protection Act (16 U.S.C. 470ii), National Historic Preservation Act (NHPA), and the Federal Land Management Policy Act (43 U.S.C. 1701). In Nevada the Protocol between the State Historic Preservation Office (SHPO) and BLM guides compliance with Section 106 of the NHPA.

   a. A Class III cultural inventory and flagging to avoid eligible cultural sites would be completed prior to start of any on-the-ground project work.

   b. If cultural resources are discovered during construction, activities which might damage or destroy such resources shall cease and the Project Coordinator shall be notified immediately.

   c. Pursuant 43 CFR 10.4 (g), the authorized officer must be notified, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4 (c) and (d) all activities must stop in the immediate vicinity of the discovery and protected for 30 days or until notified to proceed by the authorized officer.

4. A bird and small mammal access ramp/escape ladder (furnished and installed by the BLM or designed as part of the stock water trough itself) will be maintained in each stock water trough by the permittee. If necessary, the BLM will furnish the permittee with a replacement bird escape ladder.

5. Stock water troughs will be painted an earth tone color (approved by the BLM) which blends in with the surrounding environment.

6. No roads will be constructed, but vehicular use along the pipeline route would occur with routine maintenance as described in the cooperative range improvement agreement.

7. Baseline surveys will be conducted for special status species (plant and animal) prior to project implementation. Projects will be designed to avoid special status species and monitoring will be conducted to determine if indirect activities associated with projects are causing impacts.

8. Habitats of less mobile species tied to specific geographic areas (a particular spring, a burrow complex, a unique and locally rare patch of habitat) will be avoided. Examples would include burrow complexes used by burrowing owls or pygmy rabbits, a riparian area important for Columbian spotted frogs, etc.

9. A raptor and migratory bird nesting survey (using current approved US Fish and Wildlife Service protocol) will be required for projects that are proposed to be constructed between March - July. Should nests be found, construction will be postponed until completion of nesting and until after a second survey is completed to ensure no later nesting attempts have been initiated and are ongoing.

10. Pipe will be buried at least 18 inches below the ground surface unless otherwise required for engineering or avoidance of historic properties.

11. No blading, grading, or scalping of the pipeline route will be allowed. Brush removal, if necessary, will be done by hand or with "brush beater" type equipment which does not uproot brush or otherwise disturb the ground surface.

12. All trash and excess debris will be removed from the public lands and disposed of at an approved solid waste disposal site within 10 days of construction completion.

13. The permittee would ensure that troughs are left full to provide water for wildlife when livestock are removed from the area. It would be requested that water be available in the troughs from April 15 through October 15 of each year regardless of the given years grazing system as some wildlife species may become dependent on the troughs as water sources. The water shall be drained if freezing weather is forecasted.

14. The permittee would reinforce and maintain the soil surface in a 15 ft radius surrounding the trough with 6" of road base or gravel.

15. Surface disturbance associated with the project construction would not exceed a width of a 30-foot on either side of trench for the pipe. Disturbance would be limited to 30-foot diameter circle around the water trough. After construction the disturbed areas associated with the constructed pipeline would be re-vegetated using a certified weed-free seed mix. The proposed seed mix for the project area is shown below.
    a. Siberian wheatgrass.
    b. Russian wildrye.
    c. Blue flax.

16. Any areas of noxious weeds would be identified and treated before or during pre-construction activities.

2.7 Rationale for Alternative 2 and Range Improvements

Grazing use on the Bellinger Seeding Allotment would follow a three-year deferred rotation format. The Native, East, and West pastures would all be deferred during the critical growing period once in a three year period. Deferring use during the critical growing period (5/1-7/15) would improve native grass and forb cover and diversity and improve plant health and vigor of the crested wheatgrass seedings. The combination of implementing the utilization objectives and providing deferment during the critical growing period for the native and seeded pastures is likely to result in additional herbaceous cover available to enhance nesting for sage grouse and migratory birds. The Proposed Action would also reduce the possibility of direct impacts by livestock including nest destruction or displacement during nesting and fawning periods.

Shortening the season of use period (4/1 – 10/31) of the grazing permit for the allotment was proposed to better fit the needs of the permittee's livestock operation. Grazing use until December 31 is not likely to occur with the current livestock operation; historically, grazing use on allotment has ended by October 31.

As a result of the additional water troughs served by the proposed pipeline, livestock use would be better distributed to areas that were previously under utilized by livestock and would better distribute grazing use across the allotment. More evenly distributed grazing usually results in increased plant vigor and provides for overall plant community health.

2.8 Alternatives Eliminated from Further Analysis

No Grazing Alternative

Under this alternative no grazing would be authorized in the Bellinger Seeding Allotment. The term grazing permit would not be renewed. This EA tiers to the analysis in the 1986 EIS for the ELKO RMP, which analyzed five livestock use alternatives. The BLM is required to authorize only those actions that conform to the RMP as approved in the Elko Record of Decision (ROD). The Elko RMP establishes, among other things, that the Bellinger Seeding Allotment is to provide for livestock grazing use, and that livestock grazing use is to be managed so that resource management objectives will be achieved. The 1985 Elko RMP and Range Program Summary (RPS) established objectives for livestock grazing and provides for the establishment of a rangeland monitoring program to determine if management objectives are being met and to adjust grazing management systems and livestock numbers as required. Elimination of livestock grazing in lieu of making changes to the grazing systems and adjusting livestock numbers through monitoring is an action not in conformance with the RMP and RPS and is not considered by BLM to be a reasonable alternative for the analysis in this EA. In addition, monitoring data shows that Standards and Guidelines for Rangeland Health have been met on the allotment.

3. AFFECTED ENVIRONMENT/EFFECTS OF ALTERNATIVES

This chapter characterizes the resources and uses that have the potential to be affected by the Proposed Action, followed by an analysis of the direct, indirect, and cumulative impacts of the alternatives. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.

The Bellinger Seeding Allotment is located approximately 10 miles east of Elko, NV (Refer to Allotment Vicinity Map Appendix 1, Map 1). Elevations in the allotment range from 5,400 to 5,600 feet above sea level. Topography in the Bellinger Seeding Allotment is generally flat, with low ridges and shallow swales. The Bellinger Seeding Allotment has been identified both as crucial summer range for mule deer and as summer habitat for antelope by the BLM. The entire allotment is described as summer sage grouse habitat and the northern two thirds of the allotment is considered to be sage grouse nesting habitat by the Nevada Department of Wildlife (NDOW). The north east corner of the Bellinger Seeding Allotment is the only portion of the allotment that NDOW considers to be sage grouse winter habitat (Refer to Maps 3a, 3b, and 3c in Appendix 1).

The only water in the allotment is found at a well located where the three pastures (East Seeding, West Seeding, and Native) meet at the center of the allotment.

3.1 Scope of Analysis

3.1.1 Potentially Affected Resources and Uses

Issues analyzed for direct, indirect, and cumulative impacts are summarized below.

3.1.2 Related Past, Present and Reasonably Foreseeable Actions (PPRFFA's)

As defined by NEPA regulations (40 CFR 1508.7), "Cumulative impacts result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." Past, present and reasonably foreseeable future actions related to the analysis of cumulative impacts on resources or uses affected by the proposed actions primarily include livestock grazing, agriculture/hay farming, oil and gas exploration, recreation, fire suppression, hazardous fuels reduction, and weed inventories and treatments.

Livestock Grazing – Grazing of domestic cattle, sheep and horses has occurred on public and private lands in the area since at least the 1860's. The allocation of forage for livestock on public lands on a multiple use basis has occurred as a result of range adjudication after the 1934 Taylor Grazing Act and which included adjudication in the Elko District from the 1940's through the 1960's. Grazing is presently dispersed seasonally on BLM and U.S. Forest Service-administered grazing allotments. The area is part of approximately 100,000 acres that have

been type-converted, in part, to Crested wheatgrass seeding areas from the Lamoille Valley (to the north) to Huntington Valley in the 1950's to 1960's period. Levels of livestock grazing would likely remain consistent at or near present levels on public lands within the study area. Numbers on private lands could increase or decrease at the landowners discretion. Temporary livestock grazing closures have occurred in areas burned by wildfires.

Agriculture – Agriculture activities, primarily the cultivation of hay crops for livestock, occurs on private lands on or near water courses. Agriculture activities would likely remain at present levels.

Recreation – Past and present recreation uses primarily include dispersed recreation activities such as hunting, camping, nature-viewing, and off highway vehicle (OHV) travel. The entire allotment is located within the NDOW Management Unit 102. There has been a dramatic increase in OHV use in the study area since the mid-1980s. Recreation use on public lands within the assessment area is increasing based on continued population growth within Nevada including the Elko/Spring Creek communities.

Cultural Resources – Past and present cattle grazing and other land-use activities directly and indirectly affect the integrity and other aspects of the quality of both known and yet to be documented cultural resources within the allotment. Range improvements and cattle grazing can be designed to reduce the impacts to more important cultural resources (or historic properties). Information gained from earlier cultural resource studies is being utilized in this EA to make predictions about the locations and distributions of historic properties in an effort to reduce long-term cumulative impacts upon them.

3.1.3 Geographic Scope

The Bellinger Seeding Allotment is in a portion of Elko County known as the Lamoille Valley. The area affected by the Proposed Action varies by resource, but is generally bounded to the east by Rabbit Creek, Spring Creek subdivisions to the south and west, and the Elko Hills to the north.

The geographic extent of resources and uses cumulatively affected by the Proposed Action varies by the type of resource and impact, as noted below.

Table 3. – Cumulative Effects Study Areas (CESA)

Section #	ELEMENT/RESOURCE/USE	Study Area Name
3.2.5	Special Status Species, Migratory Birds, and Other Wildlife	Lamoille Valley
3.2.1/3.2.2	Vegetation/Invasive , Nonnative Species	Bellinger Seeding Allotment
3.2.4	Soil Resources	
3.2.3	Livestock Grazing	
3.2.6	Cultural Resources	

3.2 Effects of the Alternatives

3.2.1 Vegetation

Affected Environment
The Bellinger Seeding Allotment is primarily comprised of the following shrub species: Wyoming and Basin big sagebrush (*Artemisia tridentata* ssp. *Tridentate and* ssp. *wyomingensis*), rubber rabbitbrush (*Chrysothamnus nauseosus*). The following perennial/annual grasses are also present: Sandberg bluegrass (*Poa secunda*), Thurber's needlegrass (*Achnatherum thurberianum*), needle and thread grass (*Stipa comata*), bottlebrush squirreltail (*Sitanion hystrix*), Indian ricegrass (*Oryzopsis hymenoides*), crested wheatgrass (*Agropyron cristatum*), western wheatgrass (*Agropyron smitthii*), and cheatgrass (*Bromus tectorum*).

During the 1960's, the native plant community within the East and West Seeding pastures of the Bellinger Seeding Allotment was converted to crested wheatgrass seedings. Crested wheatgrass was seeded for the purpose of providing forage for livestock and to increase flexibility in grazing management options in other areas. The dominant ecological site within the crested wheatgrass seedings in the Bellinger Seeding Allotment is Loamy 8"-10" precipitation zone. The site characteristics and the average annual precipitation associated with this ecological site are suitable for producing healthy and vigorous crested wheatgrass plant communities. Plant communities dominated by crested wheatgrass in this ecological site have the potential of achieving favorable site stabilization characteristics associated with the attainment of standard #1 (Upland Sites).

3.2.1.1 Additional Data Summaries

Additional monitoring information that was collected after the issuance the July 2009 Draft Standards and Guidelines Assessment and information that was not included in the 2009 assessment is discussed in detail and summarized below:

2008 Rangeland Health Evaluation (RHE)
In April of 2008, a RHE was conducted on the Bellinger Seeding Allotment. The evaluation was completed according to procedures described in the BLM Technical Reference 1734-6-Version 4 (Pellant et al., 2005). This evaluation was a qualitative assessment of soil and site stability, hydrologic function, and biotic integrity. The RHE evaluated 17 indicators and the conclusion was that the three attributes mentioned above all rated None to Slight (N-S) for the level of departure from that expected from the same kind of ecological site considered to be in stable condition. The desirable rating is identified as None to Slight (N-S) and this site sampled was considered to be stable. The RHE was one tool an interdisciplinary team used to determine if the standards for rangeland health were being met under the current livestock grazing practices.

Key Management Area Utilization and Use Pattern Mapping

According to the utilization data displayed in the July 2009 Draft Standards and Guidelines Assessment (go to section III, A,1, pages 6 through 8 of the assessment) and utilization data summarized in Table 4. below, the utilization levels of crested wheatgrass has averaged 32% (Light Use, 21-40%) for years utilization was measured from 1982 through 2009 and utilization of native perennial key forage species has averaged 26% (Light Use) also for the years 1982 through 2009. 1982 was the first year of data used to calculate average utilization because this was the year the Key Management Areas were established. The utilization objectives for the key species are stated in Table 1. on page 3 in the July 2009 Draft Standards and Guidelines Assessment. The attainment of the utilization objectives have resulted in healthy and vigorous crested wheatgrass plants in the East and West pastures and a stable native plant community in the Native Pasture.

Table 4.

Utilization Data Not Included in the 2009 Draft Standards and Guidelines Assessment				
Key Area	Pastures	Key Species	Recorded on 11/5/08	Recorded on 10/23/09
			% Utilization	
0001	West	AGCR	33	12
0002	East	AGCR	16	16
0003	Native	FEID,ORHY,STCO,STTH2	17	31(STTH2),15(ORHY), 13(AGDA),19 (STCO)

In addition to Utilization Monitoring, Use Pattern Mapping (UPM) was conducted in 1987, 2008, and 2009 on the Bellinger Seeding Allotment (Refer to Appendix 2, Maps 1-3). Use pattern mapping is used to determine grazing use levels of key species and grazing patterns by grazing animals in a pasture or allotment. These maps can indicate if areas in the management unit are being under-utilized or over-utilized. The maps indicate that use levels received throughout the allotment for the years mentioned above were generally in the Light Use (21-40%) category.

The 1987 UPM indicated that out of the 688 acres mapped in the East Seeding Pasture 15% was at Light Use (21-40%), 70% was at Moderate Use (41-60%), 13% was at Heavy Use (61-80%), and 2% was at Severe Use (81-100%); of the 498 acres mapped in the West Seeding Pasture 33% was in Light Use and 67% was in Moderate use; of the 1,178 acres mapped in the Native (south) Pasture 99% percent was at Moderate Use and 1% was at Heavy Use.

The 2008 UPM indicated that out of 634 acres mapped in the East Seeding Pasture 73% was at Slight Use (1-20%) and 27% was at Moderate Use; of the 637 acres mapped in the West Seeding 66% was at Slight Use, 21% was at Light Use, 10% percent was not mapped, and 3% was at Moderate Use; of the 1,187 acres mapped in the Native Pasture 89% was at Slight Use, 7% was at Light Use, and 4% was at Moderate Use.

The 2009 UPM indicated that out of the 587 acres mapped in the East Seeding Pasture 19% was at None to Slight (0-5%), 48% was at Slight Use (6-20%), 32% was at Light Use, and 1% was at Moderate Use; of the 607 acres mapped in the West Seeding Pasture 20% was at None to Slight Use, 62% was at Slight Use, 17% was at Light Use, and 1% was at Heavy Use; of the 1,231 acres mapped in the Native Pasture 53% was at None to Slight Use, 45% was at Slight Use, and 2% was at Light Use.

There has been some recent loss of sagebrush due to aroga moth infestations, and cheatgrass has become well established in portions of the Native Pasture, but these factors are not affecting the stability of the sites. The vegetative cover required to stabilize soils and ensure appropriate infiltration and permeability rates is being maintained in the allotment. Figures 1a and 1b, 2a and 2b, 3a and 3b show the plant communities observed throughout the pastures at key area locations.

Figure 1a. Native Pasture. Key Area No. 3 Photo 10-23-2009

Figure 1b. Native Pasture Key Area No. 3 Photo 10-23-2009

Figue 2a. East Seeding Pasture Key Area No. 1 Photo 10-23-2009.

Figure 2b. East Seeding Pasture Key Area No. 1 Photo 10-23-2009.

Figure 3a. West Seeding Pasture Key Area No. 2 Photo 10-23-2009.

Figure 3b. West Seeding Pasture Key Area No. 2 Photo 10-23-2009

Direct and Indirect Effects of Alternatives

Alternative 1 - No Action
The No Action Alternative would result in a new 10-year grazing permit issued with the same grazing permit terms and conditions as are currently in effect. Livestock grazing would continue at current seasons of use with deferment during the critical growing period of the seeded pastures done informally and deferment for the Native Pasture occurring two out of four years. With this alternative there will be no additional water sources within the allotment; therefore many portions of the allotment would remain under utilized and small portions of the pasture near water would receive moderate to heavy use levels.

Alternative 2 – Proposed Action
Implementing the proposed grazing management provisions described in Table 2. would further the improvement of the range health standards, and other multiple use objectives. Light utilization (21-40%) is expected to continue under this alternative. Infiltration rates and hydrologic functions are likely to remain stable and satisfactory amounts of litter and sediment are likely to be observed. The proposed grazing management provisions would provide rest for key grass species during the critical growing period from grazing for each pasture one out of three years. Allowing the key forage perennial grasses to reach seedripe and disseminate seed would increase plant vigor of the native and seeded species and increase their competitive advantage against invasive annual species.

The average of 50 percent utilization not to exceed 60 percent utilization in any given year on crested wheatgrass and a maximum of 50 percent utilization on native key forage species annually along with implementing the proposed provisions for grazing management are likely to improve cover, diversity, and plant health of the native herbaceous species.

Authorizing utilization levels of up to 60 percent on the crested wheatgrass pastures are needed to maintain healthy vigorous crested wheatgrass plant communities (Horton and Weissert 1970).

Proposed Range Improvements Applicable to Alternative 2
The proposed range improvements would provide water for livestock in the north portions of the East and West Seeding pastures. The availability of additional water on the allotment is likely to improve livestock distribution and decadent plants would be better utilized. More evenly grazed landscapes often result in improved plant health and vigor and decrease grazing related impacts to cultural resources. The development of the proposed range improvements would decrease grazing pressure located near the current water source and improve recovery and recruitment of desirable vegetation.

Cumulative Impacts
The CESA for vegetation resources is the Bellinger Seeding Allotment. Both alternatives (1 & 2) and the proposed range improvements analyzed with consideration to the PPRFFA's are likely to result in positive benefits to vegetation resources; therefore, there are no cumulative impacts of concern.

3.2.2 Invasive Non-Native Species

The BLM defines an invasive weed as, "a non-native plant that disrupts or has the potential to disrupt or alter the natural ecosystem function, composition and diversity of the site it occupies. Its presence deteriorates the health of the site, it makes efficient use of natural resources difficult and it may interfere with management objectives for that site. It is an invasive species that requires a concerted effort (manpower and resources) to remove from its current location, if it can be removed at all" (BLM National List of Invasive Weed Species of Concern). Invasive and non-native plant species may spread from infested areas by people, equipment, livestock, wildlife, and winds. They often exhibit aggressive growth and have the potential to seriously degrade the economic and ecological values of natural resources. Under Executive Order 13112, it is the policy of the land management agencies to prevent introduction of noxious weeds and invasive non-native species and to control their impact (EO 13112, 1999). Nevada Revised Statute 555.005 defines noxious weeds as plants which are likely to be "detrimental or destructive and difficult to control or eradicate."

<u>Category A Weeds</u>
These weeds are not found or are limited in distribution throughout the state; actively excluded from the state and actively eradicated wherever found; actively eradicated from nursery stock dealer premises; and control is required by the state in all infestations (NDOA 2005).

One infestation of Dyers woad (*Isatis tinctoria*) was known to exist within the Native Pasture of the Bellinger Seeding Allotment near the well. In 1998 all plants recorded were pulled by hand to prevent any new seeds to proliferate. No new infestations of Dyers woad have been recorded to date.

Category B Weeds

These weeds are established in scattered populations in some counties of the state; actively excluded where possible; actively eradicated from nursery stock dealer premises; and control is required by the state in areas where populations are not well established or previously unknown to occur (NDOA 2005). Leafy spurge (*Euphorbia esula*) is known to exist in all pastures of the Bellinger Seeding Allotment. Most current GIS records indicate that there are eight infestations within the allotment, three in the Native Pasture, three in the East Seeding Pasture, and two in the West Seeding Pasture.

Category C Weeds

These weeds are currently established and widespread in many counties of the state with abatement at the discretion of the state quarantine officer (NDOA 2005).

No known Category C Weeds are known to exist within the Bellinger Seeding Allotment.

Cheatgrass is also present in the uplands in and around the allotment, but is limited mostly south and west facing slopes. Cheatgrass is a highly invasive undesirable species that thrives across the Great Basin due to its competitive nature and ability to create monocultures and less diversity in the landscape and increases the fire return interval. The shallow root systems increase erosion potentials and decrease watershed health and function. Cheatgrass negatively impacts critical wildlife habitat because it can outcompete native forbs desired for foraging needs of wildlife.

BLM is currently implementing a monitoring and weed treatment program in the Bellinger Seeding Allotment. Inventory of noxious weeds would be documented by the BLM, and would include application of BLM-approved herbicides by a certified applicator.

Direct and Indirect Effects of Alternatives

Alternative 1 - No Action

The critical growing period is when certain noxious weeds are dispersing seed and livestock are likely to be the vector for seed dispersal through their manure and trampling. However, the No Action Alternative would continue to maintain healthy plant communities which would keep cheatgrass as a minor component in the plant communities. The more aggressive weeds such as Leafy Spurge would be identified and controlled through BLM weed treatment programs.

Alternative 2 – Proposed Action

The effects are the same as the No Action Alternative.

Proposed Range Improvements Applicable to Alternative 2
The spread of invasive non-native species to the areas disturbed within close proximity of the proposed pipeline and new troughs is possible, but the chance is low because noxious weed infestation sites on the allotment are small and the BLM would monitor and treat new weed infestation sites. In addition, there is a requirement in the Proposed Special Design Feature section of this document (section 2.6.1) that requires certified weed-free seed mix during revegetation of disturbed areas.

Cumulative Impacts
The CESA for invasive non-native species resources is the Bellinger Seeding Allotment. Both alternatives (1 & 2) and proposed range improvements analyzed with consideration to the PPRFFAs the result would be no change from the present conditions for invasive non-native species. Therefore, there are no cumulative impacts of concern for this resource

3.2.3 Livestock Grazing

Affected Environment
The Bellinger Seeding Allotment contains 2,413 acres of Public Land and 43 acres of Private Land, and is made up of three fenced pastures. Of these pastures, East and West pastures are comprised of crested wheatgrass seedings that were converted from big sagebrush in the 1960's. The Native Pasture is comprised of Basin and Wyoming big sagebrush with perennial grassland vegetation type. The total permitted use for the Bellinger Seeding Allotment is 586 Active Preference AUM's, of which 145 AUM's are permitted in the Native Pasture, 220 AUM's are permitted in the East Seeding, and 221 AUM's are permitted in the West Seeding. The allotment is grazed by one permittee (Permit Authorization No. 2703224). The authorized season of use on the allotment is shown in Table 5 below.

Table 5. Bellinger Seeding Allotment (Allotment #05403) Grazing Permit Authorization

Permit Authorization No.	*Pasture*	*Number*	*Kind*	*Begin*	*End*	*Percent Public Land (PPL)*	*Active Preference AUMs*
2703224	East Seeding	24	Cattle	4/1	12/31	100	217[1]
	West Seeding	24	Cattle	4/1	12/31	100	217[1]
	Native	16	Cattle	4/1	12/31	100	145
	1 – The Active Preference AUMs for seeding and the native pastures are authorized up to the numbers described in the above paragraph and the level of grazing use is authorized consistent with the 1988 Agreement for the Bellinger Seeding Allotment. The Grazing Permit Authorization reads as stated in this table.						

Livestock grazing is an important economic activity in Elko County. A 2003 study identified 142 economic sectors within the Elko County economy. Cattle ranching recorded $53.8 million in output value, which ranked this industry 8th out of the 142 sectors; the sector employed 482 people, representing 2.53% of the total workforce, which ranked this sector 9th out of the 142 sectors; the industry realized $43.5 million in export sales, representing 5.77% of Elko County's total exports, which ranked this sector 4th out of the 142 sectors.

Total economic impact of the industry to Elko County amounted to $96.6 million dollars, with a total direct and indirect payroll of 905 jobs representing $14.4 million in income (Alevy, Jonathan, et. al., 2007; Riggs, William et. al, 2002; Fadali, Elizabeth, et. al., 2009; Fadali, Elizabeth, and Thomas R. Harris., 2006; Harris, Thomas R., et. al., 2007).

Elko County has a land base of just less than eleven million acres, of which 71.5% is in Federal ownership. Private farm and rangelands occupy another 26% of the county's land base, with the remaining 2.5% of the land base occupied by other uses. Hay is the principle crop raised on the private farmlands. The 1997 Census of Agriculture counted 402 farms and ranches in the county, with an aggregate cow herd ranking Elko County fourth in the nation in terms of animal numbers. Approximately 68% of all Elko County beef cow operations held federal grazing permits. The average Elko county ranch derives 49% of its annual forage requirements from public lands. Each Animal Unit Month utilized on public lands in Elko County is estimated to have a total production value of $38 and a total economic impact of $68. In 2006 an estimated 152,000 cows grazed within the county.

As stated above, the only permittee for the Bellinger Seeding Allotment is permitted for 586 Active Preference AUM's, which represents a total annual impact of $39,848 to the Elko County Economy.

Range Improvements (Water Developments)

The Bellinger Seeding Allotment is cross-fenced to create three pastures. The allotment has a limited network of water developments. The only existing pit reservoir is located in the East Seeding and is non-functional. There is only one well in the allotment that is located in the center of the allotment with water gaps giving livestock using all pastures access to water.

Livestock normally turn out onto public land in April and are removed to private land by October or November. Livestock are normally fed hay and held on private land through the winter. The current livestock operation usually grazes one herd, consisting of cow/calf herd operations. The sale of culled cows and weaned yearling steers provides the majority of the ranch income.

Indirect/Direct Effects of Alternatives

Alternative 1 - No Action

Under this alternative, Active Permitted Use for the allotment would remain at 586 AUM's which would represent neither an increase nor decrease in an annual economic impact to Elko County (private land excluded). A 10-year grazing permit under the existing terms and conditions would be issued. Deferment during the critical growing period on the Native Pasture would be required two out of four years. Deferment during the critical growing period for the crested wheatgrass pastures is not required under this alternative. No range improvements would be developed within the Bellinger Seeding Allotment and livestock grazing distribution would be limited to the only existing water source within the allotment.

Alternative 2 – Proposed Action
The grazing permit would be issued for a 10-year term and the Active Permitted Use would remain at 586 AUMs. The economic impact to Elko County would remain the same. Grazing management under this alternative would change from what has been historically authorized consistent with current permit terms and conditions to the proposed provisions for grazing management stated in Table 2. Grazing management under the proposed provisions would require the permittee to move livestock between pastures on a more frequent basis due to deferment proposed for the seedings.

Grazing management is expected to continue to meet the standards and guidelines, specifically standards #1 (Upland Sites) and #3(Habitat), and other multiple use resource objectives. Providing rest from livestock grazing during the critical growing period is likely to maintain the health and vigor and allow seed production of the key forage grass species. Deferment would also provide for needed cover for wildlife foraging and nesting needs. With the average of Light (21-40%) utilization levels observed on the allotment in the past and with Light Use expected to maintain satisfactory infiltration rates and hydrologic functions.

Proposed Range Improvements Applicable to Alternative 2
The proposed pipeline would provide additional water sources for livestock in the northern portions of the East and West pastures. The availability of additional water is likely to better distribute grazing throughout the pastures and decadent plants would be better utilized. Areas that have received none to slight use by livestock are likely to be better utilized resulting in fewer areas receiving moderate or heavy use. This improved distribution in grazing use would equate to more consistent and adequate herbaceous cover for wildlife across the allotment. More evenly grazed landscapes often result in improved plant health and vigor, and decrease grazing related impacts to cultural resources. The proposed pipeline and troughs would result in the permittee incurring the construction costs and maintenance costs. The additional cost by the permittee for the range improvements could be offset by increased weight gain of cattle and improved herd health.

Cumulative Impacts
The CESA for Livestock Grazing analysis is the Bellinger Seeding Allotment. The direct and indirect impacts of the Proposed Action and proposed range improvements are expected to be beneficial to livestock grazing and therefore there are no cumulative impacts of concern. Under the No Action Alternative livestock grazing would be authorized same as it has historically been authorized; therefore, there are no cumulative impacts of concern.

3.2.4 Soil Resources

Affected Environment
The dominant soils in the Bellinger Seeding Allotment are from the Hunnton-Wieland-Hunnton gravelly association soil series. They are positioned on fan piedmont remnants and composed of mixed alluvium influenced by loess and volcanic ash. They are moderately deep to deep and moderately drained with a loam to clay-loam texture. It is unlikely that biological soil crusts are present within the allotment. According to the U.S. Natural Resource Conservation Service

Nevada site description, the approximate vegetative ground cover of native vegetation appropriate for the Loamy 8 to 10" precipitation zone ecological site ranges between 20% to 30%.

Monitoring data and analysis summarized in the July 2009 Draft Standards and Guidelines Assessment (BLM 2009) for the Bellinger Seeding Allotment indicated that soils on this allotment are meeting standards of rangeland health. A rangeland health evaluation completed in 2008 concluded that departure from natural conditions were in the none to slight range. Other monitoring such as use pattern mapping and key grass species utilization revealed that average utilization was observed in the light use category. These factors are indicators that soil quality is good in the Bellinger Seeding Allotment.

Indirect/Direct Effects of Alternatives
Grazing and related activities can potentially impact soil resources by altering physical soil properties, and through removal of vegetation. Direct impacts include compaction, hoof sheer, and other physical impacts which cause soils to lose cohesiveness increasing the likelihood of erosion by wind and water. Similar impacts occur indirectly as a result of vegetation removal. A decrease in vegetative cover can increase exposure of soils to erosion from rainfall impact. A decrease in vegetative vigor due to grazing stress and increased susceptibility to weed establishment can increase the hazard of erosion.

Alternative 1 - No Action
Under this alternative impacts to soils would continue as described above for the affected environment. Standards for rangeland health would likely continue to be met in the short term but continued concentration of cattle in some portions of the allotment could negatively impact soil resources in the long term.

Alternative 2 - Proposed Action
Changes to grazing management and additional critical growing period deferment within the allotment could result in some improvement of soil quality. Improvements could come indirectly as a result of increased vegetative cover, frequency, and vigor. Direct physical impacts to soils would be expected to be the same as the No Action Alternative.

Proposed Range Improvements Applicable to Alternative 2
Installation and utilization of proposed range improvements would result in some positive and some negative impacts to soil quality. Soils along the proposed pipeline and near the proposed trough would experience permanent negative impacts. However, the proposed impacts would be within the same area already impacted by the existing fence. Pipeline maintenance and repair along with concentrated use near the proposed trough and reservoir would result in soil compaction and lack of productivity. Livestock utilization of proposed water developments could positively affect soil quality through improved livestock distribution and subsequent improvements to the vegetative community.

Cumulative Impacts
The CESA for Soils is the Bellinger Seeding Allotment. PPRFFAs along with wildfire and other natural conditions have not and are not expected to result in poor soil quality. While there are some short term negative impacts associated with the Proposed Action alternative and range improvements, they would not lead to a decrease in soil quality on the allotment scale or in the long term. The No Action Alternative in conjunction with PPRFFA's would not likely result in substantive cumulative impacts. Because the Proposed Action Alternative and range improvements would likely lead to some improvement of soil quality in the long term, there are no cumulative impacts of concern.

3.2.5 Special Status Species, Migratory Birds, and Other Wildlife

Affected Environment
This allotment provides habitat for many wildlife species, including mule deer, pronghorn, and numerous species of upland game birds, meso-carnivores, small mammals, passerine birds, waterfowl, raptors, amphibians, reptiles, and invertebrates. The July 2009 Draft Standards and Guidelines Assessment concluded that the Habitat Standard (#3) was met and further documented that current grazing is not a causal factor for the decline in habitat values in the native pasture.
Instead, it was determined that a combination of historic heavy or untimely grazing, a recent infestation of aroga moths, and cheatgrass encroachment are likely to blame for declining trends in wildlife habitat quality.

Big Game Species
The entire allotment has been identified as mule deer crucial summer range and pronghorn summer range. Mule deer depend upon healthy, diverse, and productive plant communities, adequate horizontal screening cover, and readily available browse. While pronghorn are less dependent upon cover and browse than mule deer, cover is important while raising young. Pronghorn depend upon a healthy, diverse, and productive herbaceous component to the plant community for forage.

Special Status Species
Special status species include species that are listed or proposed for listing as threatened or endangered (T&E) under the Endangered Species Act (ESA), species that are candidates for listing under the ESA, species that are listed by the State of Nevada, and/or species that are on Nevada BLM's list of Sensitive Species as of July 29, 2003. No threatened, endangered, or proposed species are known to exist on the Bellinger Seeding Allotment; however 1 candidate species, the greater sage-grouse, is known to exist here. Greater sage-grouse were designated as a candidate species by the U.S. Fish and Wildlife Service on 5 March 2010. Habitat for greater sage-grouse is present throughout the allotment. A detailed discussion of greater sage-grouse habitat and seasonal ranges can be found in the July 2009 Draft Standards and Guidelines Assessment. The Columbian spotted frog, a candidate species, has been documented within 2 miles of the allotment boundary, but no suitable habitat currently exists within the allotment. Special status species likely to exist within the allotment are listed in Table 6 below.

For this analysis, sensitive species were grouped based upon common habitat components in order to avoid unnecessary repetition.

On July 9, 2007, the bald eagle was removed ("de-listed") from the list of threatened and endangered species. BLM is coordinating with the Nevada Department of Wildlife (NDOW) to ensure compliance with state regulations regarding the bald eagle. As of August 30, 2007, BLM policy is to consider the bald eagle as a BLM Sensitive Species. After de-listing, bald eagles will continue to be protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act. Both of these laws prohibit killing, selling or otherwise harming eagles, their nests, or their eggs. In May 2007, the Service clarified its regulations implementing the BGEPA and published the National Bald Eagle Management Guidelines. The Service has established a permit program under the BGEPA that would authorize limited take of bald and golden eagles consistent with the purpose and goal of the BGEPA. The Service has also prepared a draft post-delisting bald eagle monitoring plan. These documents and more information about the bald and golden eagle are available on the Service's website at http://www.fws.gov/migratorybirds/baldeagle.htm. Year-round habitat for golden eagles is present in the Bellinger Seeding Allotment. Bald eagles likely use this allotment for occasional winter foraging.

Table 6. Sensitive species with potential to exist on the Bellinger Seeding Allotment. (from Appendix G of the 2009 Bellinger Seeding Standards and Guidelines Assessment)

COMMON NAME	SCIENTIFIC NAME
Federally Threatened or Endangered Species	
(None)	(None)
Federally Proposed Threatened or Endangered Species	
(none)	(none)
Federal Candidate Species	
Greater Sage Grouse	*Centrocercus urophasianus*
Nevada BLM Sensitive Species	
Birds	
Northern Goshawk	*Accipiter gentiles*
Ferruginous Hawk	*Buteo regalis*
Golden Eagle	*Aquila chrysaetos*
Prairie falcon	*Falco mexicanus*
Columbian Sharp-tailed Grouse	*Tympanuchus phasianellus*
Mountain Quail	*Oreortyx pictus*
Burrowing Owl	*Athene cunicularia*
Loggerhead shrike	*Lanius ludovicianus*
Juniper Titmouse	*Baeolophus ridgwayi*
Vesper sparrow	*Poocetes gramineus*
Black-rosy finch	*Leucosticte atrata*

Table 6. Sensitive species with potential to exist on the Bellinger Seeding Allotment. (from Appendix G of the 2009 Bellinger Seeding Standards and Guidelines Assessment)	
COMMON NAME	**SCIENTIFIC NAME**
Mammals	
Prebles shrew	*Sorex pleblei*
Pallid Bat	*Antrozous pallidus*
Townsend's big-eared bat	*Corynorhinus townsendii*
Big Brown Bat	*Eptesicus fuscus*
Spotted bat	*Euderma maculatum*
Silver-haired Bat	*Lasionycteris noctivagans*
Western Red Bat	*Lasiurus blossevillii*
Hoary Bat	*Lasiurus cinereus*
California Myotis	*Myotis californicus*
Western Small-footed Myotis	*Myotis ciliolabrum*
Little Brown Myotis	*Myotis lucifugus*
Fringed myotis	*Myotis thysanodes*
Long-legged myotis	*Myotis volans*
Yuma myotis	*Myotis yumanensis*
Western Pipistrelle	*Pipistrellus hesperus*
Brazilian Free-tailed Bat	*Tadarida brasiliensis*
Pygmy rabbit	*Brachylagus idahoensis*
River Otter	*Lontra canadensis*
Reptiles	
Short-horned Lizard	*Phrynosoma douglassi*

Other Migratory Birds

In addition to those protections offered to certain migratory birds that are considered Nevada BLM Sensitive Species, all migratory birds are offered certain protections under the Migratory Bird Treaty Act and Migratory Bird Executive Order. This Executive Order was signed by President Clinton on January 11, 2001. It outlines the responsibilities of Federal agencies to protect migratory birds and directs executive departments and agencies to take certain actions to further implement the Migratory Bird Treaty Act. A list of the migratory birds affected by the Executive Order is contained in 50 CFR 10.13.

Direct and Indirect Effects of Alternatives

Alternative 1 - No Action

This alternative would allow cattle grazing to continue under the terms and conditions of the current permit. Grazing management over the past decade has resulted in stable to increasing wildlife habitat quality overall. Additional factors, such as an aroga moth infestation and cheatgrass encroachment, have led to decreases in habitat quality for some species such as mule deer.

It is expected that under this alternative perennial grass and forb composition and cover would continue to exhibit a stable to increasing trend, unless the severity of the cheatgrass infestation greatly increases. Grasses in the Native Pasture would have a chance to set seed as well as transport nutrients back to the roots 2 out of every 4 years, which would, under most conditions, lead to increased cover and vigor. Mule deer and pronghorn habitat quality would increase if perennial grass and forb composition and cover increase. Horizontal cover for mule deer will likely increase as big sagebrush recovers from the recent aroga moth infestation, but this is not likely to be greatly affected by the grazing system.

Under this alternative, habitat for sensitive species including greater sage-grouse habitat is expected to remain stable or improve. Under the current grazing system, herbaceous canopy cover has increased, however a concurrent infestation of cheatgrass is likely limiting the degree of this improvement. These increases have fallen short of the ideal herbaceous canopy cover levels for nesting and brood rearing. The big sagebrush die-off due to an aroga moth infestation has negatively impacted sage-grouse habitat quality. However, because this die-off was restricted to the summer range, winter use areas were unaffected. It is unlikely that grazing management would have an effect on sagebrush height and canopy cover.

Sensitive species and non-sensitive migratory birds that rely upon upland habitats generally require a diversity of structures and forages. These species would likely see overall stable or improving trends in habitat quality under this alternative for the reasons stated above.

Alternative 2 – Proposed Action

This alternative would allow critical growing period rest for each pasture once in a three year period. This rest would insure that grasses would have a chance to set seed as well as transport nutrients back to the roots during most years, which in turn would improve herbaceous cover and plant vigor. Mule deer habitat is expected to improve due to the reduction of livestock use by two months in the fall, when they are most likely to browse shrubs important for mule deer forage. Recently, horizontal cover of big sagebrush has decreased due to an aroga moth infestation. This has resulted in a greater percentage of dead big sagebrush with little to no recruitment evident. Increasing amounts of cheatgrass are likely reducing the chances of big sagebrush seedling establishment. Without chemical control of cheatgrass, it is unlikely that this condition would improve in the short term. Further, it is unlikely that the grazing system in this alternative would affect big sagebrush horizontal cover or age class structure in a positive or negative way.

Greater sage-grouse habitat would likely improve under this alternative as well. Specifically, canopy cover of grasses and forbs are expected to increase by incorporating critical growing period rest. In addition, reducing the utilization objective for crested wheatgrass (average of 60%) is expected to maintain or improve cover values for sage grouse and other wildlife species. As this happens, early and late summer habitat quality should improve. Under the current grazing system, canopy cover of perennial grasses and forbs has increased. During the term for this permit, perennial grass canopy cover (currently 8.2%) is expected to approach or exceed the 15% minimum that is considered ideal for nesting and brood rearing habitat. Forb canopy cover (currently 8.7%) would likely exceed the 10% minimum that is considered ideal

for nesting and brood rearing habitat. Improvement in big sagebrush cover (currently 7.4%) would likely increase following the recent aroga moth infestation. Because only the most northeastern portion of the allotment is winter habitat, and that that portion was unaffected by the aroga moth infestation, this would not be an issue. Again, it is unlikely that the grazing system in this alternative would affect big sagebrush cover in a positive or negative way.

Habitat quality for sensitive species and non-sensitive migratory birds are likely to improve under this alternative. Many of these species depend upon healthy, diverse, and productive herbaceous plant communities. As plant cover and vigor increases as a result of the improved timing and distribution of cattle grazing, these species are expected to benefit. Other species, such as raptors, will indirectly benefit from an increase in prey populations.

Under this alternative, direct disturbance during the critical nesting period for migratory birds and sage grouse would be reduced with implementing critical growing period deferment.

Proposed Range Improvements Applicable to Alternative 2
The water pipeline extension and troughs would provide additional water sources for sage grouse, mule deer, migratory birds, special status bats, and other wildlife species that seek free sources of water. Short term impacts due to the construction of the pipeline and troughs may occur. In general, though, the affected species are mobile and would be able to temporarily avoid the disturbance. Construction activities would not occur during the migratory bird nesting season, or if this is unavoidable, surveys would be conducted pre-construction so that nests could be identified and avoided. The long-term benefits of these improvements from a grazing distribution standpoint as well as a water availability standpoint will outweigh the temporary effects of the disturbance. The incorporation of wildlife escape ramps in the proposed troughs is expected to minimize mortality to wildlife from drowning. Limited habitat impacts are expected as a result of construction of the proposed pipeline and troughs.

The improved water distribution resulting from the pipeline and troughs would benefit wildlife species that depend upon availability of open water.

Cumulative Effects
The CESA for analysis for wildlife is the Lamoille Valley.

The only negative impact identified for either alternative was the temporary disturbance caused by the construction of the pipeline and troughs and the potential impacts on migratory bird and greater sage-grouse nesting. Other nearby activities that could cause similar disturbances includes haying operations on private lands and construction at the urban interface in both the community of Spring Creek and the community of Lamoille. Early haying on private lands is likely to disturb nesting attempts of many ground nesting migratory birds and greater sage-grouse. These activities are generally annual occurrences and, where second cuttings would be profitable, may occur after nesting season as well. These activities usually occur without surveys being done to identify and then mitigate for these nests. Construction activities at the urban interface of Spring Creek and Lamoille are unpredictable in timing and effects. In general, they are near enough to previous and ongoing disturbances that birds will likely already

be avoiding these areas for nesting purposes. Construction activities associated with the Proposed Action Alternative are designed to minimize impacts to migratory birds and greater sage-grouse by their timing (outside of the nesting season) or by pre-construction surveys identifying areas where nesting may be occurring. It is thus determined that potential impacts of construction of the pipelines and troughs do not present a substantial cumulative effect. No negative impacts were identified for the No Action Alternative. Therefore, there are no cumulative impacts to disclose.

3.2.6 Cultural Resources

Affected Environment
The density of cultural resources is relatively low based on prior cultural resource inventories within the adjacent allotment. Few historic properties (i.e., sites eligible for the National Register of Historic Places) are known or presumed to exist within the Allotment. The few cultural resource inventories within the Allotment have not located any archaeological sites. A 2008 reconnaissance, involving walking most of the existing roads, fences, wells and other range improvements within the Allotment, failed to find any historic properties except the Sandhill Reservoir.

Indirect/Direct Effects of Alternatives

Alternative 1 – No Action
There would be no effect to cultural resources under the No Action Alternative

Alternative 2 – Proposed Action
Cultural resources shall be inventoried prior to the proposed pipeline development and any historic properties shall be avoided through rerouting of the pipeline.

Proposed Range Improvements Applicable to Alternative 2
Additional cultural resource inventories shall be completed prior to the construction of the proposed pipeline and troughs. Any historic properties shall be avoided by moving or re-routing the pipeline and troughs.

Development of additional water sources for cattle should contribute to more uniform grazing within the Allotment and would reduce the impacts associated with grazing along natural drainages and juniper woodlands (where cultural resources may be concentrated). Thus, the development of the pipeline and troughs may have indirect and long-term positive benefits to cultural resources by lessening impacts to them arising from cattle grazing.

Without the proposed range improvements, cattle will continue to trail along fences and congregate around the existing well, removing much of the vegetation in the vicinity, contributing to soil exposure, erosion, trampling and compaction. These actions and their results shall continue to have negative and adverse effects, upon known and unknown cultural resources within the allotment.

Cumulative Impacts
CESA has been identified as the Bellinger Seeding Allotment. Overall the Proposed Action and proposed range improvements would have positive effects on cultural resources, and therefore there are no cumulative impacts of concern. Although the No Action Alternative has slightly negative effects there are no cumulative impacts of concern.

3.3 Monitoring

Rangeland monitoring data would continue to be collected for the Bellinger Seeding Allotment to determine if the livestock management practices as authorized by this permit renewal are conforming to the Standards and Guidelines for Rangeland Health and other multiple use objectives for the allotment. Monitoring and data collection may continue in the form of establishing key areas, measuring utilization levels, ecological condition, vegetative cover, frequency trend, actual use reports, climate studies, professional observation, photos, and compliance checks.

The BLM would continue to implement a monitoring and weed treatment program in the Bellinger Seeding Allotment.

4. CONSULTATION AND COORDINATION

4.1 Persons, Groups or Agencies Consulted

BLM mailed the Draft Standard and Guidelines for Rangeland Health document to all members of the public interested in livestock grazing management on the Bellinger Seeding Allotment in July 2009. BLM requested input from the public to help develop management strategies and alternatives. In response to the issuance of the 2009 Assessment, the BLM received an email from Western Watersheds Project (WWP) on July 20, 2009. The comments from WWP were reviewed by the BLM through an interdisciplinary process and it was concluded that no additional studies or analysis were needed. No comments were received from other entities identified as "Interested Public" interested in livestock grazing on the Bellinger Seeding Allotment. The BLM worked with the Livestock Grazing Permittee to develop grazing management strategies and proposed range improvements.

4.2 Preparers

William B. Fawcett, Cultural Resources
Justin Rodgers, Project Lead, Livestock Grazing and Vegetation
Derrick Holdstock, Special Status Species, Migratory Birds and Other Wildlife
Mark Dean, Soil Resources
Tyson Gripp, Invasive Non-Native Species
Kirk Laird, Planning & Environmental Coordinator

4.3 Distribution

Prior to issuance of any decision to implement the action alternatives and proposed range improvements, this EA will be available for comment on the BLM public web site at:

http://www.blm.gov/nv/st/en/fo/elko_field_office/blm_information/nepa.html

A notice of availability and/or or hard copies of this EA will be sent to those individuals or organizations who have identified themselves as "Interested Public" and have requested to be involved in management decisions for the Bellinger Seeding Allotment.

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